



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,847	10/25/2001	Toshikazu Segawa	A-413	5954
802	7590	10/03/2003	EXAMINER	
DELLETT AND WALTERS 310 S.W. FOURTH AVENUE SUITE 1101 PORTLAND, OR 97204			PAK, SUNG H	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/019,847	SEGAWA ET AL.
	Examiner Sung H. Pak	Art Unit 2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) 1-4 is/are allowed.
 6) Claim(s) ____ is/are rejected.
 7) Claim(s) 5-12 is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 25 October 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) ↓ 4) Interview Summary (PTO-413) Paper No(s). _____.
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____.

DETAILED ACTION

Claim Objections

Claims 5, 6, 8-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim *cannot depend from any other multiple dependent claim*. See MPEP § 608.01(n).

Allowable Subject Matter

Claims 1-4 are allowed.

Claims 7, 11-12 are objected to as being dependent upon an objected base claim, but would be allowable if rewritten to overcome objections, and in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: a method of producing a phase mask on one side of a transparent substrate for forming optical fiber gratings is well known in the art. Also, a method of forming a phase mask having linearly or non-linearly increasing or decreasing pitch for forming a chirped fiber grating is taught in the prior art (Please refer to Segawa et al (US 6,214,495 B1), and Kurihara et al (US 6,466,714 B1) references for further discussions. Kurihara et al reference is by the inventors and the assignee of the present application). As discussed in Rothenberg et al reference (US 2002/0122626 A1) the prior art fabrication techniques are prone to stitching errors from rescaling and repositioning, which pose significant problem in manufacturing a reliable chirped optical gratings.

None of the prior art fairly teaches or suggests a method of fabricating a phase mask comprising, *inter alia*, a step of performing a multiple exposure on the phase mask substrate carried out to minimize difference between a pitch at a joint between patterns having different pitch data and a pitch in each individual pattern, as claimed in the instant application.

Unruh reference (US 2003/0048988 A1) does disclose a step of repeating optical beam exposure to perform a multipass error correction, however, the filing date of the reference is 8/28/2001, which is after the effective filing date of the present application.

Conclusion

This application is in condition for allowance except for the following formal matters:

Improper multi-dependent claims 5-6, 8-10.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (703) 308-

4880. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.

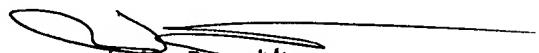
The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Sung H. Pak
Examiner
Art Unit 2874

sp


Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800